

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to FIGs.1 - 4.

Attachment: Replacement sheet 1, including FIGs. 1 - 4

REMARKS

Reconsideration is respectfully requested.

I. STATUS OF THE CLAIMS

Claims 1 – 8, 10 and 11 are presently pending in the application, with claim 9 having previously been canceled. Applicants amend claims 1, 2 and 8. No new matter is introduced.

II. OBJECTION TO DRAWINGS

FIGs. 1 - 4 are objected to as failing to include the designation "PRIOR ART." Applicants submit replacement sheet 1 of 2, which include revised FIGs. 1 - 4. Revised FIGs. 1 - 4 each include the designation "PRIOR ART."

Therefore, Applicants respectfully request that replacement sheet 1 be accepted and entered, and that the objections to FIGs. 1 - 4 be withdrawn.

III. REJECTIONS UNDER 35 U.S.C § 112

Claims 1 – 8, 10 and 11 are rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite. Specifically, the Examiner finds that the term "dimensioned to define an increase in the structural rigidity" in claim 1 is relative and unclear. In addition, the Examiner finds that the terms "its extension" in claim 2 and "the extension of a respective suction orifice" in claim 8 lack sufficient antecedent basis.

In the interests of prosecution efficiency, Applicants amend claim 1 to eliminate the term "dimensioned to define an increase in the structural rigidity," and amend claim 2 to eliminate the term "its extension." Applicants also amend the term "the extension of a respective suction orifice" in claim 8 to recite "an interior of at least part of an extension of a respective suction orifice," and respectfully submit that the amended term has sufficient antecedent basis.

Therefore, Applicants respectfully request that the rejections of claims 1 – 8, 10 and 11 under the second paragraph of 35 U.S.C. § 112 be withdrawn.

IV. REJECTIONS UNDER 35 U.S.C. § 103

Claims 1 – 8 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,722,818 to Ohta (“Ohta”) in view of U.S. Patent No. 4,582,468 to Bar (“Bar”). Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohta and Bar in view of U.S. Patent Publication No. 2002/0098093 to Tomell et al. (“Tomell”). Applicants respectfully traverse the rejections of claims 1 – 8, 10 and 11 under 35 U.S.C. § 103(a).

In amended independent claim 1, Applicants claim:

1. A suction system for a refrigeration compressor of the type which comprises a cylinder ;
a valve plate which is provided with at least two suction orifices, each selectively closed by a suction valve, and which closes a cylinder end;
a cylinder head mounted against a face of the valve plate opposite to that closing the cylinder and which defines a discharge chamber occupying part of said cylinder head and partially contouring the suction orifices ; and
a suction muffler comprising a hollow body having an outlet tube projecting therefrom and presenting a free end seated on the valve plate,
said cylinder head being provided, externally to the discharge chamber, with a reinforcing wall portion,
wherein the free end of the outlet tube is provided with two tubular projections which are parallel to each other, each being coaxially aligned with and seated against a respective one of the suction orifices of the valve plate.

(Emphasis added).

Ohta discloses a suction valve arrangement for a hermetic compressor that includes a cylinder 12, a valve plate 15, a cylinder head 16 and a suction muffler 17. A passage pipe 18 has a free end which approaches the valve plate 15 via a through hole 35 in the cylinder head 16. As

acknowledged by the Examiner, Ohta does not disclose that the free end of the passage pipe 18 is provided with two tubular projections each coaxially aligned with a respective suction orifice of the valve plate 15. The Examiner however suggests that this deficiency is overcome with the addition of Bar.

Bar discloses a suction muffler 24 for hermetic motor compressors that includes two pipes 52 that extend from the muffler into a suction chamber 26 in a cylinder head of the compressor. The Examiner notes that Bar teaches the use of the two pipes 52 as a means for preventing rotation of the muffler 24 in response to vibrations generated by the compressor, and suggests that rings 54 which are positioned on an outer circumference of the pipes correspond to Applicants' claimed suction orifice of a valve plate.

Applicants respectfully disagree with this characterization. Bar does not disclose that valves in a valve plate are located as a part of or in proximity to either of the pipes 52 or rings 54. Rather, it appears that the two pipes extend into an open volume of the suction chamber 26, and that the rings 54 function not as a suction orifice but as a retention device by which the pipes 52 are retained in the cylinder head and suction chamber 26.

Even assuming *arguendo* that Bar is simply applied to suggest modifying the free end of the passage pipe 18 of Ohta to comprise two tubular projections, Applicants submit that this combination would still fail to teach, absent Applicants' specification as a roadmap, that the tubular projections are each coaxially aligned with and seated against a respective suction orifice of the valve plate.

In the suction valve arrangement taught by Ohta, a cavity 22 defining a low-pressure space 36 is provided between suction holes 24, 25 and the passage pipe 18 (see, e.g., FIG. 6 of Ohta). The low-pressure space 36 enables a reduction in suction resistance as compared to designs omitting the cavity 22 (see, e.g., Col. 5: 9 – 13 of Ohta). Applicants submit that the combination of Bar with Ohta would simply suggest that two pipes be provided in fluid communication with the

cavity 22 of Ohta (analogous to the suction chamber 26 of Bar), and would not suggest that the pipes each be coaxially positioned with respect to each suction orifice. Moreover, because the cavity 22 is provided between the passage pipe 18 and the holes 24, 25 in Ohta and the pipes 52 are provided in an open volume of the suction chamber 26 in Bar, Applicants submit that the combination would in any case fail to teach or suggest Applicants' claimed configuration in which each tubular projection is seated against a respective one of the suction orifices. These deficiencies are not overcome with the addition of Tomell.

Accordingly, Applicants submit that amended independent claim 1 is not obvious in view of the cited references and stands in condition for allowance. As claims 2 – 8, 10 and 11 each depend from allowable independent claim 1, Applicants also submit that dependent claims 2 – 8, 10 and 11 are also allowable for at least this reason.

Therefore, Applicants respectfully request that the rejections of claims 1 – 8, 10 and 11 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

The Examiner is respectfully requested to contact the undersigned at the telephone number indicated below if the Examiner believes any issue can be resolved through either a Supplemental Response or an Examiner's Amendment.

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Respectfully submitted,

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Attachments

Application No. 10/597,469
Amendment dated January 14, 2010
Reply to Office Action of August 18, 2009

Docket No.: 04306/0205126-US0

REPLACEMENT SHEET

Application No. 10/597,469
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ANNOTATED SHEET SHOWING CHANGES